**Today**

**You said:**

How I can use combination of SCAN function with others in excel to reset cumulative at each change in first column value. See array below:

A 96

A 100

A 17

A 88

A 91

B 32

B 45

B 49

B 61

B 75

B 6

B 57

C 16

C 47

C 38

C 18

C 77

C 80

C 55

C 70

C 29

D 23

D 83

D 15

D 34

D 81

D 39

D 25

D 9

D 27

D 82

**Copilot said:**

Copilot

To reset the cumulative sum at each change in the first column value using the SCAN function in Excel, you can combine it with the IF function. Here's a step-by-step guide:

1. **Insert a new column** for the cumulative sum.
2. **Use the SCAN function** to calculate the cumulative sum, resetting at each change in the first column value.

Here's how you can do it:

1. **Assume your data starts from cell A1** and the first column is in column A, and the second column is in column B.
2. **Insert a new column C** for the cumulative sum.

In cell C2, enter the following formula:

=SCAN(0, B2:B31, LAMBDA(acc, x, IF(A2:A31=A1:A30, acc + x, x)))

This formula uses the SCAN function to iterate over the range B2:B31, accumulating the sum. The IF function checks if the current value in column A is the same as the previous value. If it is, it adds the current value in column B to the accumulator. If not, it starts a new cumulative sum.

1. **Drag the formula down** to apply it to the entire column.

This will give you a cumulative sum that resets at each change in the first column value.

If you have any questions or need further assistance, feel free to ask!

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**You said:**

Tried this way but calc# error

**Copilot said:**

Copilot

It looks like there might be an issue with the formula. Let's try a different approach to ensure the cumulative sum resets correctly at each change in the first column value.

Here's an alternative method using the SCAN function combined with the IF function:

1. **Assume your data starts from cell A1** and the first column is in column A, and the second column is in column B.
2. **Insert a new column C** for the cumulative sum.

In cell C2, enter the following formula:

=SCAN(0, SEQUENCE(ROWS(B2:B31)), LAMBDA(acc, i, IF(A2:A31=A1:A30, acc + INDEX(B2:B31, i), INDEX(B2:B31, i))))

This formula uses the SEQUENCE function to generate an array of row numbers, which helps in referencing the correct values in column B. The SCAN function iterates over this sequence, and the IF function checks if the current value in column A is the same as the previous value. If it is, it adds the current value in column B to the accumulator. If not, it starts a new cumulative sum.

1. **Drag the formula down** to apply it to the entire column.

This should resolve the calculation error and give you the desired cumulative sum that resets at each change in the first column value.

If you encounter any further issues, please let me know!

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**You said:**

why you are not considering B1:B31?

**Copilot said:**

Copilot

You're right, I should consider the entire range including B1:B31. Let's correct that.

Here's the revised approach:

1. **Assume your data starts from cell A1** and the first column is in column A, and the second column is in column B.
2. **Insert a new column C** for the cumulative sum.

In cell C2, enter the following formula:

=SCAN(0, B1:B31, LAMBDA(acc, x, IF(A2:A31=A1:A30, acc + x, x)))

This formula uses the SCAN function to iterate over the range B1:B31, accumulating the sum. The IF function checks if the current value in column A is the same as the previous value. If it is, it adds the current value in column B to the accumulator. If not, it starts a new cumulative sum.

1. **Drag the formula down** to apply it to the entire column.

This should give you the correct cumulative sum that resets at each change in the first column value.

If you encounter any further issues, please let me know!

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**You said:**

I found this example:

=SCAN(0,ROW(A1:A30),LAMBDA(acc,x,IF(INDEX(B:B,x)=0,0,acc+INDEX(A:A,x))))

here: https://stackoverflow.com/questions/79119804/create-a-running-total-that-resets-under-specific-conditions

Can we use it to modify our scan function? I gave you my arrays in previous prompts

**Copilot said:**

Copilot

Sure, we can modify the example you found to fit your specific arrays. Let's adapt it to reset the cumulative sum at each change in the first column value.

Here's how you can do it:

1. **Assume your data starts from cell A1** and the first column is in column A, and the second column is in column B.
2. **Insert a new column C** for the cumulative sum.

In cell C2, enter the following formula:

=SCAN(0, ROW(A2:A31), LAMBDA(acc, x, IF(INDEX(A:A, x) = INDEX(A:A, x-1), acc + INDEX(B:B, x), INDEX(B:B, x))))

This formula uses the SCAN function to iterate over the range A2:A31. The IF function checks if the current value in column A is the same as the previous value. If it is, it adds the current value in column B to the accumulator. If not, it starts a new cumulative sum.

1. **Drag the formula down** to apply it to the entire column.

This should give you the correct cumulative sum that resets at each change in the first column value.

If you encounter any further issues, please let me know!

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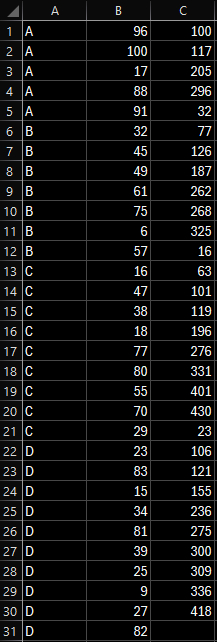
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**You said:**

See My array A1:B31, but my SCAN starts from A2:A31 because Offset used in SCAN will give error since there is no ROW above 1. How to resolve? Function currently used is: =SCAN(0, ROW(A2:A31), LAMBDA(acc,x, IF(INDEX(A:A, x) = INDEX(A:A, x-1), acc + INDEX(B:B, x), INDEX(B:B, x))))

I have attached the image. See column C It should start from 96 and below that sum should be 196:



**Copilot said:**

Copilot

Thank you for sharing the image and the details. To resolve the issue with the SCAN function starting from A2:A31 and handling the offset correctly, we can adjust the formula to ensure it works properly from the first row.

Here's the revised formula:

1. **Assume your data starts from cell A1** and the first column is in column A, and the second column is in column B.
2. **Insert a new column C** for the cumulative sum.

In cell C2, enter the following formula:

=SCAN(0, ROW(A2:A31), LAMBDA(acc, x, IF(INDEX(A:A, x) = INDEX(A:A, x-1), acc + INDEX(B:B, x), INDEX(B:B, x))))

To handle the first row correctly, we need to modify the formula slightly to avoid referencing a non-existent row above the first row. Here's the updated formula:

=SCAN(0, ROW(A2:A31), LAMBDA(acc, x, IF(x = 2, INDEX(B:B, x), IF(INDEX(A:A, x) = INDEX(A:A, x-1), acc + INDEX(B:B, x), INDEX(B:B, x)))))

This formula includes an additional condition to check if the current row is the first row (x = 2). If it is, it directly takes the value from column B. Otherwise, it performs the cumulative sum calculation as before.

1. **Drag the formula down** to apply it to the entire column.

This should give you the correct cumulative sum that starts from 96 and resets at each change in the first column value.

If you encounter any further issues, please let me know!

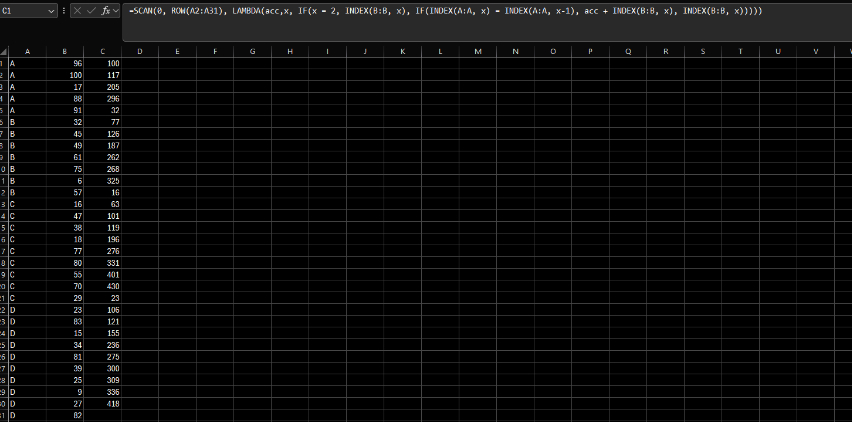
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**You said:**

Problem is I have to start using formula from 2nd cell not the first one in C column. if (x=2 also does not resolve the issue. See the image with formula bar:



**Copilot said:**

Copilot

Thank you for the clarification and the image. Let's adjust the formula to ensure it works correctly starting from the second cell in column C.

Here's the revised approach:

1. **Assume your data starts from cell A1** and the first column is in column A, and the second column is in column B.
2. **Insert a new column C** for the cumulative sum.

In cell C2, enter the following formula:

=SCAN(0, ROW(A2:A31), LAMBDA(acc, x, IF(x = ROW(A2), INDEX(B:B, x), IF(INDEX(A:A, x) = INDEX(A:A, x-1), acc + INDEX(B:B, x), INDEX(B:B, x)))))

This formula includes an additional condition to check if the current row is the first row in the range (ROW(A2)). If it is, it directly takes the value from column B. Otherwise, it performs the cumulative sum calculation as before.

1. **Drag the formula down** to apply it to the entire column.

This should give you the correct cumulative sum that starts from the second cell in column C and resets at each change in the first column value.

If you encounter any further issues, please let me know!

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**You said:**

But I want to start SCAN from ROW 1 and not ROW 2.

**Copilot said:**

Copilot

Got it! Let's adjust the formula to start the SCAN function from ROW 1. Here's how you can do it:

1. **Assume your data starts from cell A1** and the first column is in column A, and the second column is in column B.
2. **Insert a new column C** for the cumulative sum.

In cell C1, enter the following formula:

=SCAN(0, ROW(A1:A30), LAMBDA(acc, x, IF(x = ROW(A1), INDEX(B:B, x), IF(INDEX(A:A, x) = INDEX(A:A, x-1), acc + INDEX(B:B, x), INDEX(B:B, x)))))

This formula uses the SCAN function to iterate over the range A1:A30. The IF function checks if the current row is the first row (ROW(A1)). If it is, it directly takes the value from column B. Otherwise, it performs the cumulative sum calculation as before.

1. **Drag the formula down** to apply it to the entire column.

This should give you the correct cumulative sum that starts from the first row in column C and resets at each change in the first column value.

If you encounter any further issues, please let me know!

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**You said:**

That worked finally.

**Copilot said:**

Copilot

I'm glad to hear that it worked! If you have any more questions or need further assistance with Excel or anything else, feel free to ask. Happy to help! 😊

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**You said:**

Change I needed to make was A1:A31 and not A1:A30.

**Copilot said:**

Copilot

Great catch! I'm glad you were able to resolve it. If you have any more questions or need further assistance with Excel or anything else, feel free to ask. Happy to help! 😊